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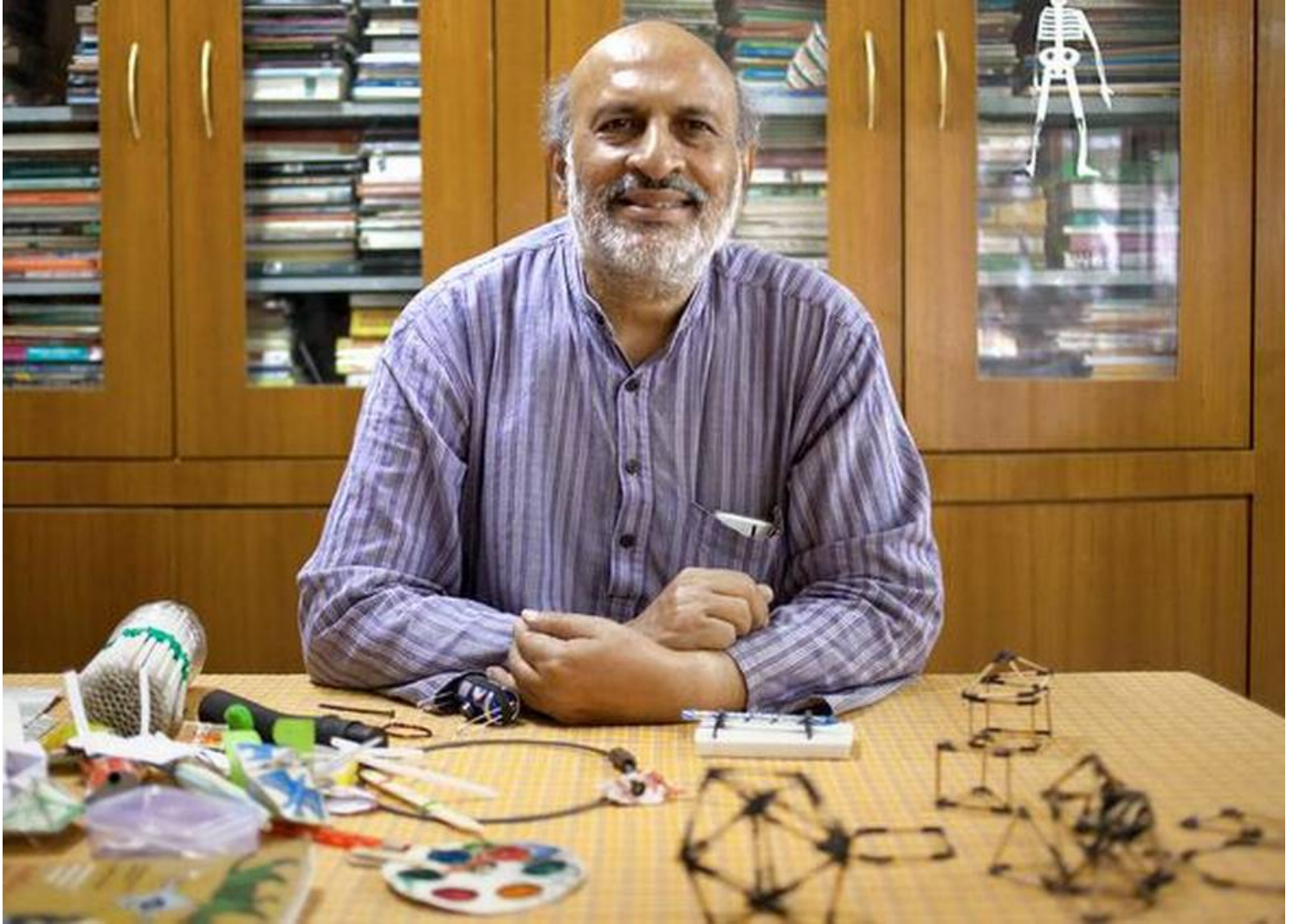
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SOCIETY

Making science child's play



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MARCH 28, 2017 16:44 IST

UPDATED: MARCH 28, 2017 16:44 IST

Arvind Gupta was in his twenties when he made his first 'toy from trash'. Today, at 63, the innovator continues doing what he does best — taking Science to children in every nook and cranny of the country

It has been almost four decades since Arvind Gupta's life-changing encounter at a weekly bazaar in the Piparia Palia village of Madhya Pradesh. He had been dealing with heavy machinery till then – he was making trucks for Telco – but the trinkets displayed on the bazaar floor caught his attention unlike anything else. He bought some matches, a cycle valve tube, and a little of everything he saw. That evening, Gupta created his first-ever 'Science toy' – matchstick models. Today, seated in his Chennai apartment, the 63-year-old's eyes light up with a similar excitement when he extracts a plastic box filled with such toys to show us.

For the child in us

"I have two boxes with about 150 toys that I take with me whenever I visit a school," he says, demonstrating the 'levitating pen' that he designed using a pen, a broken CD, magnets, and a piece of polystyrene. "Look!" he says, showing us a stick figure of a man. Even those without interest in Science are bound to be fascinated by these arrangements of ordinary objects that convey the extraordinary in the simplest of ways.

We stop taking notes and peer into that box of ingenious toys – each of them costs nothing more than ₹20 and can teach Science better than any teacher or textbook can. Gupta's website has 8,150 such videos on toys with trash. They are available in 20 languages, including Chinese and Spanish.

Video stories

Gupta has meticulously added experiment after experiment to his website, with the help of his team at Inter-University Centre for Astronomy & Astrophysics in Pune, which created the videos. Now that he's retired from the Centre, Gupta is spending most of his time translating books for children from English to Hindi, and uploading them into the free web space Archive.org. "We grew up on a diet of books from the Soviet Union in the 60s and 70s. They were excellent and cheap. But the books have disappeared and may never be reprinted. I'm trying to source such great books and scan them. I recently scanned 400 Russian books," he explains.

Now that he will be spending most of his time in the city, Gupta is being invited by schools to demonstrate his Science toys to students. Back in Pune, he would spend every Tuesday and Thursday interacting with students; he did so for 11 years. Gupta must have worked with thousands of children in the country; visited hundreds of schools. But he feels that as far as our education system is concerned, "The terrain is barren". He adds,

“There is no soil to nurture a good seed.”

Information for all

One way to address this problem, according to him, is to “make great stuff available to children.” That’s where his toys and videos come into the picture. Gupta feels that “city kids are easily distracted”. Whereas those from the lower economic strata and small towns, he feels, have a tremendous amount of eagerness to learn something new. “They are as bright as kids from anywhere else,” he says.

Gupta often talks about “the gleam in the eyes of a child” when he/she creates something. It is the same gleam that we see in his eyes when he talks about making resources available to the poorest kids in our country.

This is all it takes to instil an interest in Science in them, for Gupta says that “children learn so much by playing with these toys themselves.”

What makes a good toy?

“A good toy,” he adds, “Is something that can be taken apart and put back together.” A good school is one in which “children are allowed to do what they want to do.” Gupta knows that there is an ocean waiting to be taught; countless books to be translated into local languages from English. That’s what he aims to do now – translate, scan, upload.

Printable version | Mar 29, 2017 3:25:59 PM | <http://www.thehindu.com/society/making-science-childs-play/article17701953.ece>

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